

GASIL

General Aviation Safety Information Leaflet



www.caa.co.uk/gasil

Issue no 2 of 2010

Start right

According to a pilot who recently infringed the London Control Zone, he had set heading from his departure aerodrome on the heading he had calculated as correct for the following leg, some 40 degrees different. He then relied on an ADF bearing to confirm his track but was unable to obtain a reading from the instrument.

When operating close to controlled airspace, it is vital that the pre-flight planning and route study is carried out meticulously, and that every means at your disposal is used to confirm that you are in fact travelling in the direction you intend. Where a line feature such as a motorway or major dual carriageway goes in the general direction of your track, take note of where you want to be relative to it, especially if it runs close to the boundary of the controlled airspace you need to avoid!

In a light aircraft being operated under VFR, any radio aid is a back up to visual navigation, and should be used as such. However, if you intend using it, you need to know how to operate it correctly. If unsure, get instruction from someone who can teach you!



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Military Civil Aviation Safety Day

As many pilots will have realised, the MCASD event to be held at RAF Lyneham on 19th May has proved extremely popular, so much so that application forms have been withdrawn and some of those who have applied already may be disappointed. It is hoped that another event at a different location can be organised for later in the year, so pilots are advised to check on www.caa.co.uk/mcasd for further information.

CAA VFR Charts

These are the publication dates of CAA charts recently issued and due in the near future.

ICAO 1:500,000 scale

Southern England and Wales	Edition 36	11 th March 2010
Northern England and Northern Ireland	Edition 33	6 th May 2010

ICAO 1:250,000 scale

Sheet 8	England South	Edition 14	8 th April 2010
Sheet 4	The Borders	Edition 7	3 rd June 2010

The VFR charts “updates” pages, currently on www.caa.co.uk/charts, are updated every 28 days. These pages should be consulted as part of flight planning.

Undercarriage indications

Just a reminder that certain warning and undercarriage indicators, such as the PA 28R undercarriage indicator, may be selected either ‘day’ or ‘night’, either with a dedicated selector or perhaps through the instrument lighting switch.

If selected to ‘night’ during daylight operations, it may appear that there is no indication, and this has led pilots in the past to believe incorrectly that their undercarriage has failed to lower. It has also led other pilots to miss important warnings.



Human factors in engineering

The AAIB's bulletin 1 of 2010 includes a [report](#) on a serious incident to an EC135. Maintenance organisations may wish to use the report in their human factors training programmes.

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UK Airprox Board contact – wrong again!

Despite our attempting to correct the incorrect e-mail addresses we published in a previous issue, a further error appeared in issue 1 of 2010. The UK Airprox Board may be contacted at either: ops@airproxboard.org.uk or admin@airproxboard.org.uk

Red Arrows displays

As detailed in AIC M 004/2010, Restrictions of Flying (Temporary) will be in place for the Red Arrows during the month of March at the places listed below.

Place	Position	Radius	Altitude	Date
Kirton-in-Lindsey	532755N 0003438W	6 nm	8200 ft	12 March 2010
Cottesmore	524344N 0003930W	6 nm	8500 ft	12 March 2010
Coningsby	530538N 0001014W	6 nm	8100 ft	15 March 2010
Linton-on-Ouse	540256N 0011510W	6 nm	8100 ft	16 March 2010
Valley	531509N 0043219W	6 nm	8100 ft	17 March 2010



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Times for each display, plus any changes or additions to the programme, will be notified separately by NOTAM, feature in the daily AIS Information Line message (0500-354802) and will be included on the Pre-flight Information Bulletins (PIB) through the AIS Web site at <http://www.ais.org.uk>. The team's next UK displays are expected in May. Pilots are reminded of the need to check AICs and NOTAMs, and to avoid the display areas.

Silence may not be golden!

In UK airspace, there is seldom a long period of silence on any radio frequency. Indeed, for that reason, a number of GA pilots whose aircraft are equipped with VHF radios opt to operate non-radio when flying in Class G airspace.

While we would prefer pilots to remain in radio contact with air traffic services, we understand the desire for a quiet life. We know of some who actually switch the radio off completely, but we would definitely advise against that. We suggest that it is preferable by far to just turn down the volume on a frequency they may need in an emergency or perhaps intend using in future.

However, especially if we do wish to remain in communication with Air Traffic Services, we need to maintain situational awareness. If a previously busy frequency appears to have gone quiet, have we experienced a radio failure? Have we (or a passenger) made an inadvertent switch selection which has muted or switched off the radio or its amplifier? We know of a pilot who apparently caught the radio switch in turbulence, resulting in considerable concern (and workload) for the ATC unit with which he had previously been in contact. If we are experiencing a long gap in radio traffic, it may be worth just making a 'radio check' on the frequency in use to confirm our equipment is still working properly.

Gliders are difficult to see!



We frequently draw attention to the hazards of flying over and around gliding sites. However, a large number of gliders fly considerable distances away from their launch sites during the summer, sometimes in competitions which are notified as navigation warnings, but often without such notification. Their airspeed while climbing may be slow, but between climbs they frequently reach similar speeds to those of cruising light aeroplanes.

Like many modern light aeroplanes, most gliders are predominantly white by virtue of their construction. Their colour provides some contrast against a dark background, but little against the sky, especially against the puffy cumulus clouds which are often found above the thermals they use to gain height during the spring and summer months. Fortunately, sunlight glinting on their wings as they circle can often guide others' eyes to them, but when cloud comes between the glider and the sun there is no such glinting. Glinting is also unlikely if the glider is cruising in a relatively straight line between thermals, or when flying at higher altitudes in mountain wave (which they may use at any time of year). Their narrow wings add to the difficulty of seeing them.

However, because glider pilots are always trying to gain as much energy from the air as possible, they tend to cruise between obvious thermals. That means there is a high probability that they will be found under any line of cumulus clouds, usually but not

always towards the sunny edge of it. Such a line may not be immediately obvious to a power pilot, but if we consider that the gliders will generally avoid any large gaps between these clouds, that is probably the safest place to be to avoid them. And avoid them we must, not only because they have legal priority if encountered in a converging situation, but also because they are designed to withstand high forces and are therefore pretty solid when hit.

SafetySense leaflet 13 "Collision avoidance", available like all such leaflets in LASORS and free for download from the CAA web site www.caa.co.uk/safetysense, recommends methods of scanning outside the cockpit in order to spot other aircraft. However, it is difficult, and tiring, to maintain such a lookout scan for a long time. If we are aware when and where a collision is most likely, we can concentrate our attention at these times and places.

So, when? Collisions are most likely when the weather forecast has encouraged pilots to fly. If at the same time poor in-flight visibility prevents us seeing another aircraft until it is close, the hazard increases, but if that same poor visibility has been forecast it may discourage others from flying. Of course, if we fly above the haze layer (or the tops of any cumulus clouds) in the summer months, we not only increase our in-flight visibility, but we are much less likely to encounter a glider, since thermals do not go above that.

And where? Collisions are most likely where aircraft are 'funnelled' into narrow areas between restrictions, either natural or artificial. Pilots operating in the South of England, West of London, are aware that, even though crossing controlled airspace is theoretically possible, almost every light aircraft flying North or South will either pass between Brize Norton and Benson, between Lyneham and Bristol, or over the top of Fairford. Other funnels exist, and they are usually restricted further by controlled airspace above them.

Gliders not only pass through the same 'funnels', but will seek rising air over obvious thermal sources such as power stations whether cumulus clouds are visible or not.

At these times, and in these places, the threat of a collision is probably at least as great as that in the circuit pattern. It is probably not a good idea to practice manoeuvres which cover a lot of sky in these circumstances. We certainly cannot afford to let our scan slip!

Patterns at strips

Private landing strips are often found in relatively close proximity to each other. While this seldom causes problems, there is always a hazard if two or more traffic patterns overlap. Hopefully, as in most cases of which we are aware, the owners of neighbouring strips agree procedures to reduce the risk of collision, and advise pilots using their aerodromes of these.

The risk of collision is increased if no agreement is in place, so we encourage owners to meet and agree wherever possible. However, even agreed procedures cannot eliminate that risk if pilots do not follow them. This is one of the reasons we strongly advise pilots to telephone the strip owner before visiting. However, in the absence of published procedures, an 'overhead' join pattern around the airfield, as illustrated on the [poster](#) in

LASORS and free for download from the CAA web site www.caa.co.uk/safetysense should be followed, giving due consideration to any other strips in the vicinity.

Whether or not an agreement is in force, the Rules of the Air Regulations will always apply, and must be followed. For example, if the approach to one strip brings an aircraft overhead (or nearly so) another, under Rule 12 the pilot must either conform to the traffic pattern being followed by aircraft at that aerodrome, or keep clear of it. In any case, good airmanship dictates that he should make sure his flightpath keeps that pattern, and especially the runway, within sight (on his left unless ground signals indicate otherwise), and not directly underneath his aircraft where activity cannot be monitored.

Emergency ADs

EASA produces [bi-weekly](#) summaries of the ADs they have issued or approved, which are available through their web site www.easa.eu. [Foreign-issued](#) (non-EU) Airworthiness Directives are also available through the same site, as are [details](#) of all recent EASA approved Airworthiness Directives. CAA [ADs](#) for UK manufactured aircraft which have not yet been incorporated in CAP 747 can be found on the CAA web site www.caa.co.uk > Safety Regulation > Operations & Airworthiness > Airworthiness Directives

We are aware that the following Emergency Airworthiness Directives have been issued recently by EASA, however this list is not exhaustive and must not be relied on.

Number	Applicability	Description
EASA 2010-0011-E	Scheibe SF-25	Aileron hinges & stabilizer fittings
EASA 2010-0025-E	Aero AT-3, AT-4	Rudder pulleys
EASA 2010-0026-E	Eurocopter EC 120 B	Main rotor head hub

Decision making

A [report](#) in the AAIB's Bulletin 1 of 2010 concerns an Agusta 109 which suffered a failure in the landing gear system. No-one was injured and the damage to the aircraft was limited to minor, because the crew (and their engineering support) used the time and fuel available to consider the problem carefully and assess possible alternatives. The aircraft was eventually landed on a pile of tyres after disembarking the passengers in the hover.

Articles in GASIL, like television news items, usually concern things going wrong. In this case, we are delighted to be able to remind people that, if the aircraft is still flying, there is seldom a need to make snap decisions.

Flaps

Fully extended flaps reduce take-off and climb performance. In some aeroplanes, it may not be possible to climb after take-off or go-around in that configuration at heavy weights and high density altitudes (usually hot weather and/or low QFE). This applies especially to aircraft with flaps which extend to 40 degrees, whose pilots are usually fully aware of the need to ensure flaps are positioned correctly.

A recent FAA Special Airworthiness Information Bulletin (SAIB CE-09-40R1) concerns Commander 112 and 111 aircraft. Amongst other information, it notes that there have been instances of the flap selector being installed upside down, or the internal spring failing. Either of these can result in any lowering selection (perhaps to the take-off position) producing full flap deployment. An upside down switch would prevent automatic retraction continuing when the selector is released.

Other aircraft have similar types of flap selectors which are intended to automatically retract fully on UP selection, and are spring loaded to prevent them travelling DOWN beyond the position at which the switch is released. The advice contained in the SAIB is valid for all aircraft, advising as it does that a full check of the flap system is carried out before take-off, not only to ensure that the flap moves as intended, but also that moving the selector produces exactly the result intended.



Flying Control Cables

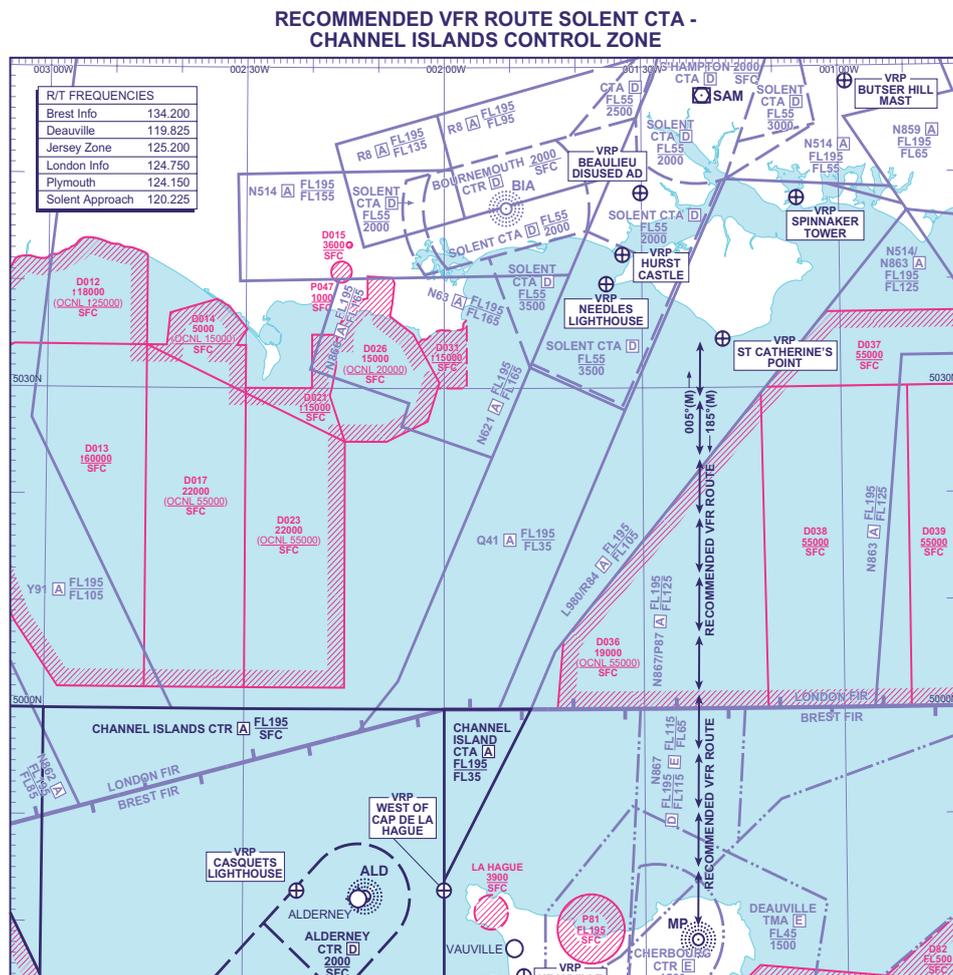
Occasionally, we come across instances of cables being incorrectly fitted during build or routine maintenance. While the instance reported in last month's occurrence digest appears to have resulted in no more than 'light polishing', there have been instances of severe chafing, control restriction, and even crossed controls.

Whether an engineer or an owner qualified to carry out work on your own aircraft, care is needed when routing and connecting cables. With the best of intentions, whilst trying to maintain the tension in the cables during any work it is easy to ease the pressure off enough to let the cable slip. It is important therefore that the full cable run be checked and the system operated to check for 'full and free' movement. All cables that are connected to, or form part of, the flying controls, should be inspected by an independent qualified person who was not involved in the original work.

South Coast Recommended VFR Route

Changes have been made to the Recommended VFR Route between the Solent CTA and the Channel Islands. These are included in Edition 36 of the CAA 1:500,000 England South and Wales VFR chart, published on 11 March, together with guidance on how to obtain details of EGD 036 activity, through which the route passes.

The route has been amended to commence at N503430 W0012107, outside the Solent CTA and abeam St Catherine's point at the southern tip of the Isle of Wight. In addition, as detailed in NOTAMs, a number of additional VRPs have been established. Further guidance may be found on the *Solent VFR Guide* on the flyontrack website www.flyontrack.co.uk and 'How to fly through the South Coast Danger Areas' which may be found via the Airspace and Safety Initiative Website.



Essential French for British pilots - 1

“ORAGE” means “thunderstorm” – if you hear the word on the radio it is probably worth treating it as an ‘amber warning’ about carrying on into anything other than totally clear weather!

Safety Awards

The CAA invites nominations for its General Aviation Safety Awards. These may be individuals who have made a lasting contribution to safety, or one-off acts of skill or bravery during 2009. Previous winners have been honoured for displaying good airmanship or practical skills when faced with potentially serious incidents directly related to flying. However, we are also encouraging nominations for aerodrome managers, air traffic controllers and maintenance engineers for their prolonged dedication to aviation safety. Nominees should be over 16 years of age and can be organisations or individuals. Nominate at: www.caa.co.uk/ga_award, or on a form available from our Corporate Communications Department (telephone 020 7453 6030).

Windy

Once upon a time March was noted for windy conditions (March winds, April showers). While the month may be nearly over, it may be of value to consider the effects that strong winds may have on our aircraft and the way we operate them.

We are all aware of the hazards posed by crosswinds. Hopefully we know our own limitations regarding take-offs and landings in crosswinds, as well as the correct techniques. We must also be prepared for strong headwinds, which may lead to windshear on the approach and possible loss of airspeed, especially in gusty conditions. Careful pilots add between 1/3 and 1/2 of the headwind component when approaching in strong headwinds, and are prepared to take account of gusts.

We must also be prepared for strong winds on the ground. We know of several instances, including 2 at the same aerodrome on different days last winter, when aircraft have been blown around, and even blown over, on the apron. Ensure the aircraft is tied down in accordance with the Flight or Maintenance Manual before leaving it, even if strong winds are not forecast. You may not visit the aerodrome until after the next big blow.



When taxiing (or stationary during taxi), tailwheels can be lifted by winds from the rear, and even for aeroplanes with tricycle undercarriages Flight Manuals frequently advise holding control surfaces appropriately. "Climb into a headwind and dive away from a tailwind" is an expression commonly used. It reminds pilots that if the wind is coming from forward of the beam, the elevators should be held up with the ailerons held into the wind, and if the wind is coming from behind the beam, the elevators should be held down and the ailerons held with the wind.

However, even correctly positioning the control surfaces may not prevent an aircraft being blown over. Last November, a Cessna 172 was rolled onto its wingtip at the holding point when the surface wind was reported as gusting above 45 knots. We have previously advised that pilots should seriously consider ceasing operations when the wind is gusting more than 2/3 of the aeroplane's stalling speed (1/2 for taildraggers).

GA Safety Evenings

The last two of this season's Safety Evenings will be held at Turweston on Monday 15th March, and at the Rosemarket Golf Club, SA73 1JY, near Haverfordwest, on Thursday 18th March, for which the aerodrome is offering free landings provided they have given prior permission. Preparation for next winter's programme will start towards the end of April. Any organisation who wishes to host an evening then, or at any time in the future, should contact David Cockburn at the address given on page 2, or by e-mail to david.cockburn@caa.co.uk. The [programme](#) will be available as it is arranged on the CAA's web site at www.caa.co.uk/safetyevenings